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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/022,662

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Josef Wittl

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02/18/2004

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EXAMINER

LUU, THANH X

ART UNIT

PAPER NUMBER

2878

DATE MAILED: 02/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/022,662

Applicant(s)

WITTL ET AL.

Examiner

Thanh X Luu

Art Unit

2878

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 December 2003.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-17 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This Office Action is in response to amendments and remarks filed December 23, 2003. Claims 1-17 are currently pending.

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-17 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. It appears that Applicant has failed to disclose an embodiment in which an active area is "substantially completely shielded" as claimed. Nowhere in the specification does it use the terms "substantially completely."

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, it is unclear in its given context what "substantially completely shielded" means. That is, the scope of the terms "substantially completely" is unknown.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1, 2, 4-6, 8, 11-13, 15 and 17, as understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Ilegems et al. (U.S. Patent 4,127,862).

Regarding claims 1, 2, 4-6, 8, 11-13, 15, Ilegems et al. disclose (see Figures 1 or 3) an opto-electronic assembly for receiving optical signals, comprising: at least two detectors (photodiodes PD3, PD2, PD1) each with an optically active area for converting optical signals into electrical signals, the at least two detectors being arranged on one another, and the optically active area of one of the detectors being shielded. In addition, Ilegems et al. disclose (see Figure 1) one of the detectors is disposed directly opposite the carrier (26) is thereby shielded from optical signals. Ilegems et al. also disclose (see Figure 1) a carrier (26) supporting one of the detectors and the active areas receive the optical signals in the same direction and the active area of one of the detectors is shielded by the other detector. Ilegems et al. also

disclose (see Figure 1) the carrier (26) is formed with at least one optically transparent opening, the opening is functionally associated with the active area of the unshielded detector. Ilegems et al. further disclose (see Figure 3) an intermediate layer (TJ1, TJ2) disposed between the detectors. Further since the active areas are of the same size (see Figure 2), the active areas are substantially identical or are similar. Ilegems et al. also disclose (see Figure 3) an evaluation device (R_L and voltage measurement) connected to the detectors for evaluating signals from the detectors. In addition, since the structure of the assembly is the same, one of the detectors functions as a signal interference generator as claimed.

8. Claims 1-3, 4, 8, 9, 11-13, 15, as understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Yamada et al. (U.S. Patent 5,455,415).

Regarding claims 1-3, 4, 8, 9, 11-13, 15, Yamada et al. disclose (see Figures 12 or 13) an opto-electronic assembly for receiving optical signals, comprising: at least two detectors (D1, D2) each with an optically active area for converting optical signals into electrical signals, the at least two detectors being arranged on one another, and the optically active area of one of the detectors is shielded. In addition, Yamada et al. disclose (see Figure 13) one of the detectors is disposed directly opposite the carrier (34) is thereby shielded from optical signals. Yamada et al. also disclose (see Figure 13) a carrier (34) supporting one of the detectors and the active areas receive the optical signals in the opposite directions and the active area of one of the detectors is shielded by the other detector. Yamada et al. also disclose (see Figure 13) the carrier (34) is formed with at least one optically transparent opening (hole), the opening is

functionally associated with the active area of the unshielded detector. Yamada et al. also disclose (see Figure 12 or 13) an optically dense material (36) darkening the optically active area of one detector. Further since the active areas are of the same size, the active areas are substantially identical or are similar. Yamada et al. also disclose (see Figure 19) an evaluation device connected to the detectors for evaluating signals from the detectors.

9. Claims 1, 2, 4-7, 11-15, as understood, are rejected under 35 U.S.C. 102(e) as being anticipated by Goossen (U.S. Patent 6,271,943).

Regarding claims 1, 2, 4-7, 11-15, Goossen discloses (see Figure 7) an optoelectronic assembly for receiving optical signals, comprising: at least two detectors (P-I-N photodiodes) each with an optically active area for converting optical signals into electrical signals, the at least two detectors being arranged on one another, and the optically active area of one of the detectors is shielded. Goossen also discloses (see Figure 5) a carrier (substrate) supporting one of the detectors and the active areas receive the optical signals in the same direction and the active area of one of the detectors is shielded by the other detector. In addition, Goossen discloses (see Figure 7) one of the detectors is disposed directly opposite the carrier is thereby shielded from optical signals (from the bottom of the device). Goossen further discloses (see Figure 7) an intermediate layer (80) disposed between the detectors or the detectors (upper detectors) and the carrier. Further since the active areas have similar materials, the active areas are substantially identical or are similar. Goossen also discloses (see

Figure 8) an evaluation device connected to the detectors for evaluating signals from the detectors, wherein the evaluation device has at least one differential amplifier.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 10 and 16 rejected under 35 U.S.C. 103(a) as being unpatentable over Yamada et al.

Regarding claim 10, Yamada et al. disclose the claimed invention as set forth above. Yamada et al. do not specifically disclose the dense material as a sprayed compound. However, providing a shading film that is sprayed is well known (e.g. spray paint). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide a sprayed dense material in the apparatus of Yamada et al. to reduce costs and more easily deposit the material.

Regarding claim 16, Yamada et al. disclose the claimed invention as set forth above. Yamada et al. further disclose (see Figure 13) a common anode connection. Yamada et al. do not specifically disclose the cathode contacts arranged on one another as claimed. However, common cathode and common anode connections in photodiodes are well known. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide a common cathode connection as claimed in the apparatus of Yamada et al. to more easily bias the photodiodes.

Response to Arguments

12. Applicant's arguments filed December 23, 2003 have been fully considered but they are not persuasive.

Regarding Ilegems et al., Applicant asserts that all of the photodiodes of Ilegems et al. detect optical signals and that none of the photodiodes are partly or completely shielded from the optical signals. Examiner disagrees. Firstly, the claims state "two detectors each with an optically active area for converting optical signals..." Thus, as claimed, the both detectors of the invention may detect optical signals. Secondly, as understood, the overlap of the photodiodes of Ilegems et al. meets the language of "substantially completely" shielded, as a substantial part of PD2 or PD3 (see Figure 3) is shielded from the optical signals.

Regarding Yamada et al. and Goossen, Applicant asserts that the photodiodes of Yamada et al. and Goossen both receive light. Examiner agrees. However, the claimed invention does not preclude the detectors from receiving light. The claims state "two detectors each with an optically active area for converting optical signals..." Thus, as claimed, the both detectors of the invention may receive light. Also, as understood, if an active area is *substantially* completely shielded, the active area still receives light since the active area is not completely shielded from the light.

Thus, as set forth above, this rejection is proper.

Conclusion

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

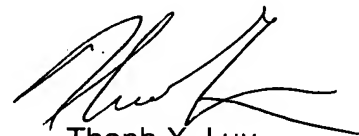
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh X. Luu whose telephone number is (571) 272-2441. The examiner can normally be reached on Monday-Friday from 6:30 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Porta, can be reached on (571) 272-2444. The fax phone number for the organization where the application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

txl
February 11, 2004



Thanh X. Luu
Primary Examiner